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ABSTRACT

For many youths, the early years in the labor market are characterized not by an absence of jobs but rather by a "churning" process that often delays the benefits of high school educational experiences for several years. Youth apprenticeship programs should be designed to serve as a strategy/vehicle of school reform, function as a labor market program, and create institutional structures that link employers and schools. Among the principles that should be followed in designing youth apprenticeship programs are the following: permit students to change their minds about choices; link work and schooling in a substantive way; encourage schooling beyond high school; avoid tracking, gender discrimination, adult displacement, and highly specific training; and provide high quality work placements rather than just work experience. Special attention must be paid to obtaining placements, developing certification criteria and procedures, and obtaining an adequate research and development base. A youth employment policy should do the following: reflect existing demands for youth labor, facilitate the school-to-work transition, be school based, and provide adequate services to out-of-school and disadvantaged youth. (Contains 16 references.) (MN)

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Youth Apprenticeships and School-to-Work Transition: Current Knowledge and Legislative Strategy

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Introduction

School-to-work transition has generated a great deal of recent discussion in political arenas and in the American media. While there is broad-ranging concern that a growing proportion of American youth lack a grounding in the fundamental educational and social skills needed to enter and advance in the workforce, policy makers still lack a comprehensive sense of many issues that involve youth employment: where,or when the failure to connect with work can occur; what the apparent instability of youth employment—or "churning"—actually signifies, as well as what causes it; and what type of system on what scale is needed to facilitate this transition, particularly in terms of youth apprenticeship.

This paper contains two parts. The first section, Part I, contains an analysis of the current state of knowledge concerning the youth labor market; an identification of the problems in this market, which youth apprenticeship programs are intended to address; a discussion of program design issues for youth apprenticeships; and a presentation of key legislative issues. The remainder of the paper, Part II, consists of summary accounts of the material presented on March 3 and 4, 1993, at the "Youth Employment Policy Seminar," organized by Paul Osterman of the Massachusetts Institute of Technology's Sloan School. The outcomes of this conference, which included recommendations for planning a national system of youth apprenticeships, directly informed the discussion contained in Part I of this paper.

Part I: Youth Apprenticeships and School-to-Work Transition Policy

Without doubt, there is a great deal of promise in the idea of a national system of youth apprenticeships, and it is more than good news that these kinds of programs are being proposed. Nonetheless, in the rush to solve the nation's employment problems, many policy makers are gearing up to design the best "kit" and to jump on the bandwagon called "best practice" when discussing a national youth apprenticeship system. Caution is in order, however, because investigation into the current state of knowledge about youth apprenticeships shows that much less is actually known than previously believed. Because the surge of funding that will most likely accompany these programs may lead to hasty decision making, there is instead a greater need to identify what these programs should incorporate and to locate areas of inquiry, rather than to offer quickly devised solutions and paradigms.

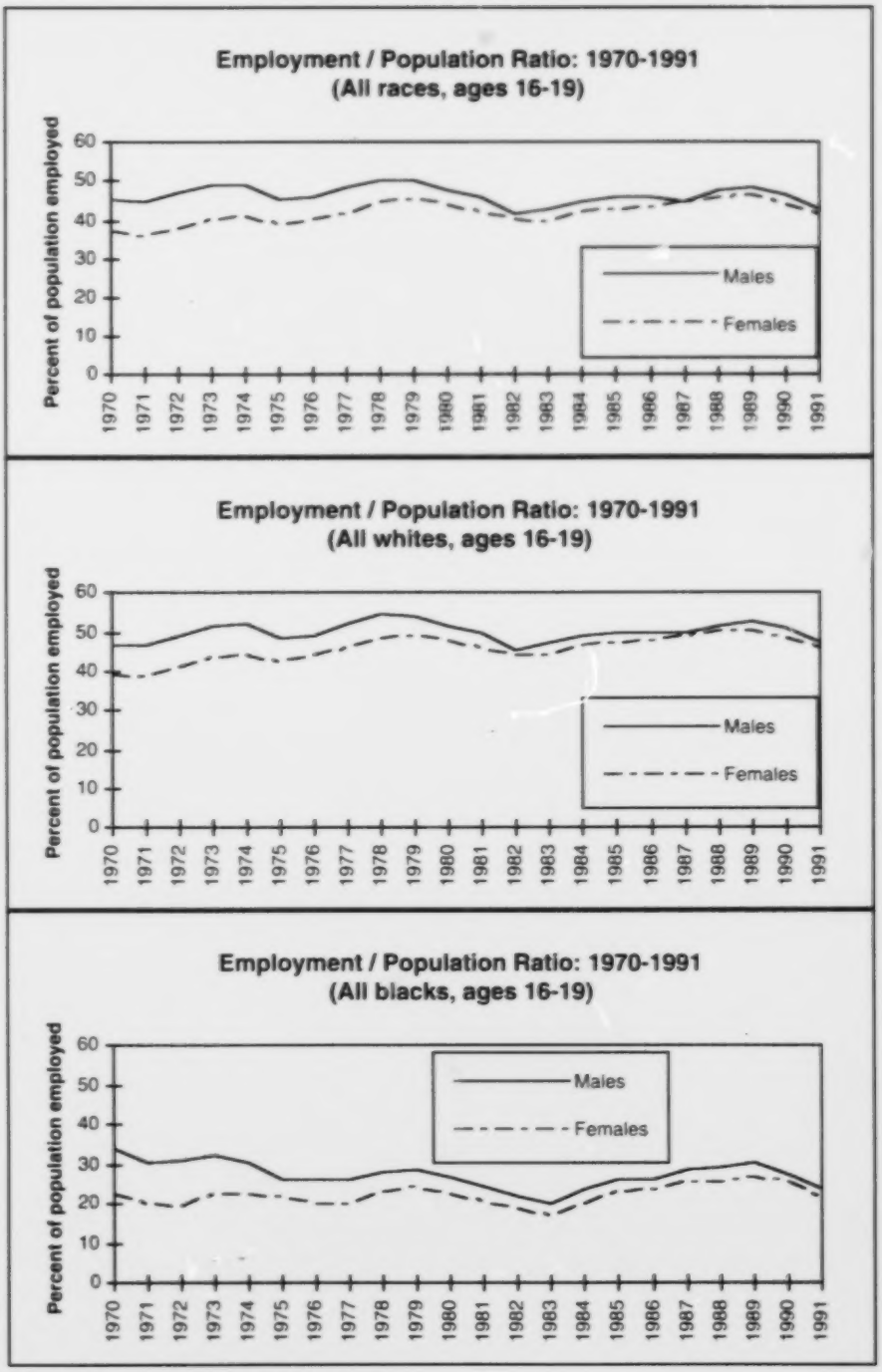
Characterizing the Youth Labor Market

Any discussion of youth apprenticeships should begin with a description of the condition of the youth labor market. Is it job quality or job acquisition that poses problems for young workers? The question can be answered in two ways. For inner city—often minority—youth, the problem lies in a real lack of jobs. Indeed, the situation of minority youth represents a major social crisis: in October 1992 only 21.2 percent of 16- to 19-year-old black youth were employed, compared to 45.9 percent of 16- to 19-year-old white youth (Bureau of Labor Statistics 1992).

The problems of at-risk youth have long been at the center of federal youth policy; unfortunately, however, efforts have not been very effective in addressing their situation (see Osterman forthcoming [a] for a review of the evaluation literature). At the Youth Employment Policy Seminar, Robert Ivry and Fred Doolittle described these recent federal efforts, which are summarized in the second section of this report. One of the concerns regarding the new apprenticeship initiatives is that they may not adequately serve at-risk youth. These programs will rely heavily upon obtaining training placements in private-sector firms; and, given the difficulty of obtaining these placements, there will be a strong tendency to cater to the most job-ready youth. The fact that this type of program may not be the best-designed for at-risk youth should not be seen as a fatal criticism, provided that adequate additional resources are devoted to this group.

Youth who will graduate from high school but most likely will not attend college face a different problem: job quality. Using data from the Bureau of Labor Statistics' "Earnings and Employment" that tracks an employment/population ratio for 16- to 19-year-olds, Figure 1 shows that there has been a slight downturn in youth employment. Yet there is no evidence that jobs have begun to "dry up" for these youth. Table 1 proves the same point using the National Longitudinal Survey of Youth. The pattern in this table shows no evidence of a collapse in the youth labor market, nor does it indicate the onset of a youth job crisis.

Figure 1
Employment Population Ratio, Ages 16-19



Source: Bureau of Labor Statistics 1992.

Table 1
Activity Patterns for Men and Women Aged 16-31

	16-19	20-24	25-28	29-31
Men				
Working	21.9%	53.9%	81.2%	85.7%
Unemployed	4.7%	11.1%	4.4%	3.5%
In School	68.5%	23.4%	5.4%	5.0%
Armed Forces	0.4%	6.5%	4.0%	2.2%
Other	4.5%	5.2%	5.0%	3.6%
Women				
Working	18.9%	49.3%	67.9%	66.1%
Unemployed	5.8%	8.6%	4.6%	4.0%
In School	65.6%	21.4%	4.9%	4.8%
Armed Forces	0.1%	0.7%	0.6%	0.1%
Other	9.6%	20.0%	22.0%	25.0%

Source: National Longitudinal Survey of Youth and Osterman (forthcoming [a])
Note: The first three columns follow a cohort aged 16-19 in 1979 until they were 25-28 in 1988. The final column represents a different cohort, those aged 29-31 in 1988.

The early years in the labor market for many graduating students are characterized not by an absence of jobs but rather by a "churning" process. High turnover and frequent job change are evident during this period when youth sample different jobs or simply move from one low-skill job to another. The phenomenon of churning represents a characteristic of the youth labor market that has important implications for program design. For example, in their research on achievement tests, Richard Murnane, John Willett, and Frank Levy (1993) found that the economic payoff to performing well on an algebra test appeared six years after graduation—there was no return apparent as early as two years afterwards. This delay in receiving a premium may be attributed to the turbulence in the youth labor market caused by churning; these young workers may have experienced high turnover in a series of low-skill, low-wage jobs with no application for eighth-grade algebra. Among other things, churning explains why transcripts and scholastic information are rarely used by employers, since these low-skill jobs would not necessitate their use. If most youth jobs share these characteristics, it is not helpful to propose improvements in the transferal of information; as long as youth are employed in these jobs, the availability of academic information becomes a moot point.

The problem facing youth who experience this churning process is more subtle than the simple absence of jobs. What happens when the period of churning has concluded? Evidence suggests that a substantial fraction of this cohort has been unable to "settle down" into quality jobs. In the past, most youth in their late twenties—even if they did not attend college—could expect eventually to obtain stable employment; this is no longer true. This particular difficulty is illustrated in Table 2, which shows that as many as 50 percent of high school youth had not found a steady job by the time they reached their late twenties.

The difficulty that youth face in successfully settling down is exacerbated by changes in the adult or career labor market, in which the most pervasive change has been the rising demand for skills. Increasing premiums for skill are best demonstrated by the growing inequality in wages received by high school and college graduates. However, skill-driven inequality also occurs among people with the same education. When Murnane, Willett, and Levy (1993) compared wage rates for 1972 and 1980 high school graduates six years after graduation with the scores they received on the previously mentioned algebra test, they observed that the premium for having greater math ability increased over time—an indication that the labor market had changed the way in which it rewarded this skill. For example, for male 1972 graduates, scoring six points above average on the test yielded a premium of 46 cents more per hour than the wages received by a student who scored six points below the average; for 1980 graduates, that differential increased to $1.15 per hour.

In the adult labor market, the emergence of high-performance work systems accounts for much of the increase in demand for higher levels of skill. High-performance work systems are now being adopted across industries, including the service sector, as work organization undergoes significant change. The Commission on the Skills in the American Workforce (1990) found a relatively low rate of use of these work systems, but more recent evidence suggests that approximately 30 percent of firms have now altered their orga-

Table 2
Job Tenure Ages 29-31 in 1988

	All	High School Grad (No College)	High School Drop-out
Men			
In Current Job More Than 2 Years	42.8%	54.8%	27.7%
In Current Job 1-2 Years	15.8%	12.8%	23.0%
In Current Job Less Than 1 Year	37.0%	32.4%	49.3%
Women			
In Current Job More Than 2 Years	31.7%	30.7%	19.4%
In Current Job 1-2 Years	16.6%	14.4%	20.6%
In Current Job Less Than 1 Year	51.7%	54.9%	60.0%

Source: National Longitudinal Survey of Youth and Osterman (forthcoming [b]).

nizations to include these systems (Osterman forthcoming [b]). This trend contributes to the demand and reward for higher levels of skill, primarily because higher-performance work—which utilizes strategies such as teams, quality circles, and job rotation—requires flexible employees with transferable skills.

Since youth labor market churning as well as changes in the adult labor market impact youth apprenticeship design, the location of placements (in either the youth or adult markets) becomes another important consideration. Will youth apprenticeship slots be created in positions in the youth labor market that have no return for skill? Or, will programs place apprentices in the upper-end or adult labor market, which has always had an aversion to hiring youth? If apprentices are placed in an adult labor market on a large scale, employers must overcome their dislike or distrust of young employees.

In summary, for the bulk of youth not bound for college, the problem that public policy must address is not the simple absence of jobs but rather the difficulties these youth face in settling down into quality jobs in the adult labor market—a problem that has been exacerbated by rising skill requirements. If we accept a period of churning as part of the process, many of the ideas regarding improved information systems between schools and employers seem less compelling. In addition, if—in the first few years after high school—most youth find relatively unskilled jobs in the youth labor market, policy makers must ask whether this market can indeed provide quality apprenticeship placements. A great deal of consideration is necessary to ensure that these placements do not simply increase the number of unskilled youth jobs. Alternatively, if the program seeks to bypass the churning period and place youth directly into adult settings, then it is important to help employers overcome their reluctance to hire youth and the reluctance of the youth themselves to "settle down" at such an early age.

Finally, it may be that apprenticeship proposals are best considered as school reform strategies, in which case these labor market issues become somewhat less compelling.

Program Design and Structure

New program initiatives must be considered in an existing context that is characterized by rather weak efforts to link school and work. For example, according to Thomas Bailey's presentation (see "The School-to-Work Transition Process" on page 14), only 10 percent of students who found employment after high school used school resources to locate those jobs; other survey data show that less than 50 percent of students have even seen a high school counselor—much less have used the resources that schools provide. There currently are no broad-based institutions linking school and work.

To provide the infrastructure necessary for a successful system of youth apprenticeships, policy must clearly delineate program objectives. Apprenticeship programs can be envisioned as having three potential goals:

1. **Youth apprenticeships as a strategy for school reform.** One way to reform schooling is by linking it to work. Making the high school experience more meaningful and compelling encourages students to continue their education. Most importantly, by initiating curricular changes that integrate academic and vocational learning and teach academic subjects in the context of work, schools can provide job-relevant abilities to students and motivation for traditional academic learning. Additional components include encouraging youth to continue their education beyond high school and using work experience to encourage students to make the extra investment.

2. **Youth apprenticeships as a labor market program.** This perspective views youth apprenticeships

as a "jobs program." The focus is to hasten the transition from school to work and to avoid whatever costs are incurred as part of the churning process.

3. **Youth apprenticeships as creating institutional structures that link employers and schools.** In this view, the central objective is to establish a community structure that can react effectively to changing needs in the schools and the youth labor market. Apprenticeships provide a forum within which labor market actors (businesses and unions) can work with schools to improve the curriculum and provide jobs. From this perspective, the apprenticeship initiative may be viewed as beginning a process and not simply as establishing a program. This point becomes particularly important because we currently lack information on what constitutes "best practice" or what makes an apprenticeship model effective, and we need to establish a flexible structure that will adjust as each community's experience emerges.

In thinking through these visions, it is clear that—depending on the relative weight given to each—there are different implications for program design. For example, if the primary objective is to motivate academic learning by providing a work-related context, then options such as school-based enterprises are viable and finding job placements to teach usable skills becomes less central. If the initiative is seen primarily as a jobs program, then elements such as a school-based employment service are important and the quality of the job placements becomes central.

In deciding which of these objectives is most plausible it is helpful is to draw upon the experience of existing programs. Four current models, which differ in the balance of school and work tasks, inform the design of future programs. The first is cooperative education, which offers part-time jobs in the latter-half of the school day. At present, approximately 8 percent of high school juniors and seniors (450,000) are enrolled in these programs. Career academies, schools-within-schools organized around specific occupations, reach a smaller cohort: 9,000 students through 150 programs. Tech prep, which links schools and community colleges, enrolls 330,000 to 980,000 students. The last example, apprenticeship demonstration models, is the most recent. Roughly 30 demonstration models, involving 5 to 115 students each, have been attempted. (For a more detailed description of these programs, see "School-Based Policies" on page 16.)

Although evaluation results are in short supply, several broad conclusions emerge from the available information:

1. Low-quality work experience does not seem to have employment, wage, or school retention payoffs. This issue is important for "scaling up" apprenticeship programs.

2. Students who find their own after-school jobs through the normal operation of the youth labor market seem to experience positive short-run, post-high school payoffs. However, long-term impacts are unknown and impacts on in-school academic performance are mixed, with some evidence that "excessive" work experience can degrade school performance.

3. While there is no evidence of economic gains from co-op education, career academies, and tech prep, results do indicate that there are positive effects on attitudes, attendance, and drop-out rates for some models. However, it is unknown which program components actually contribute to the positive effects.

Although there is little available data to measure outcomes of the new apprenticeship demonstration programs, the existing evidence does suggest caution. For example, Boston's Project Pro-Tech has experienced mixed results. Only a surprisingly small fraction of high school students

met the relatively low entry standards, which suggests that this model would be difficult to implement on a large scale. Furthermore, subsequent termination rates among those who did enter the program were very high. On the other hand, those who continued in the program were more likely than others to remain in grade-level math and science. The program also has experienced difficulty inducing curriculum change in its three participating high schools.

Program Principles

Regardless of the philosophy chosen as a framework for design, certain principles should be considered during the construction of any program. The following questions provide a gauge to test the components of any proposition:

- **Does the program permit mind-changing and avoid tracking?** The current American system, for all its weaknesses, has one major virtue relative to foreign models: young people are able to change their minds, since they are not "locked in" at an early age to a particular school or career path. It is very important to preserve this characteristic, and it is as essential to ensure that new programs are of high quality—particularly to avoid the perception that they serve as "dumping grounds" for "less able" students.
- **Does it link work and schooling in a substantive way?** As already indicated, the choice among the broad program goals will influence the content of program activities. Nonetheless, at the core of all program models should be the linking of school and work. This involves using work experience to motivate academic activities and to transform how academic subjects are taught; using work to motivate continued school attendance; developing more effective bridging mechanisms, such as school-based employment services, between schools and the labor market; and transforming job placements into learning environments.
- **Does it encourage continued schooling beyond high school?** Not all young people should be expected to continue into post-secondary education, and it would be incorrect to make this an absolute criteria for program design. This is particularly true if the apprenticeship effort is seen primarily as a youth jobs effort. However, the earning situation of youth with only a high school degree is deteriorating; every possible effort should be made to encourage young people to seek additional schooling. At the minimum, therefore, these programs should encourage and facilitate further education. This involves assuring that participation in the program does not preclude the option of additional schooling. In a more proactive sense, it involves encouraging post-secondary education by involving four-year and community colleges in actual program activities and by creating mechanisms that ease the transition between different levels of schooling for students.
- **Does it avoid gender discrimination?** Foreign models, which have served as the basis for the U.S. discussion, too often make gender-based distinctions. This dynamic certainly must be avoided.
- **Does it avoid adult displacement?** This issue emerges when youth apprenticeships are discussed in terms of scale and when the location of the apprenticeship position—in the youth or adult labor market—is considered. Publicly sponsored jobs for youth should not result in unemployment for adults.
- **Does it avoid narrow or highly specific training?** Programs should not create systems that subsidize employers to train people in narrowly focused skills.
- **Does it provide quality work placements, not just work experience?** As already noted, work experience programs have not had much success. Although the intensity of the job placements may vary, depending on which of the program objectives is chosen, it is important that the placement be seen as something other than "make-work."

Obtaining Placements

Obtaining an adequate number of quality job placements will be among the most difficult aspects of program design. A "quality" placement incorporates these two characteristics:

1. Youth engage in work that is worthwhile in the sense of producing meaningful output. Put simply, students are not expected to simply do "make-work," and hence a respect for work is deepened, not diminished.
2. The work is structured so that it provides learning experience, adequate supervision, and instruction.

Most jobs will fall short on one of these two dimensions. The second criteria—work-based learning—is particularly troublesome. While youth labor market employers are unlikely to offer youth assignments that teach anything beyond the relatively simple skills required for the job, adult labor market employers will be reluctant to divert resources to teaching activities. We know very little about how to successfully attract employers and gain broad private sector participation. Indeed, this is probably the most difficult obstacle facing the expansion of these programs on a large scale.

There appear to be three strategies worth pursuing. The first is simply to build programs that appeal to one of the several motives which have proved successful in past, smaller-scale efforts. These motives include labor shortages in selected industries (such as health care or machine tools) as well as appealing to community citizenship. The second potential strategy would attempt to transform youth labor market jobs—the kind of placements that youth normally procure—into more of a learning experience. Current experiments at some McDonald's franchises offer one example: employees become involved in all aspects of the franchise's functioning, and the result is an increase in quality jobs and a reduction in turnover.

The final strategy considers the problem of obtaining placements in a broad, community-based context, rather than approaching it on an employer-by-employer basis. This strategy involves developing an ongoing organization among employers and public officials—a partnership that would encompass the objective of school reform as well as job placement. Efforts along these lines, such as the Boston Compact, have had partial success but may experience difficulty when confronted with the twin challenges of entrenched school bureaucracies and economic downturn. Nonetheless, given the difficulty of implementing apprenticeship programs on a large scale, this is an approach worth pursuing.

Certification Credentials and Youth Apprenticeship

Along with youth apprenticeships, there is a great deal of interest in creating skill and training standards for several reasons:

1. Standards may provide the infrastructure for expanding youth and adult training. They can perform this function by ensuring that quality requirements are met and that the skills that are taught are sufficiently general.
2. Standards also can help coordinate training providers and employers by initiating and maintaining their interaction around the creation of standards.
3. Standards provide a forum for schools and providers to interact on curriculum and workplace issues. Through institution building, they create processes within communities for school reform and establish dialogue about curriculum.

While the case for standards is strong, there are dangers inherent in certification that should be considered at the outset:

1. Standards must not simply reify outdated practices and institutionalize yesterday's jobs.
2. It is important to avoid developing occupational barriers in the workplace.

3. It is important to be sure that standards do not lead to exclusionary certification and licensing programs.
4. Finally, since standards are likely to be developed at local levels and by various industry groups, it is important to avoid creating a confusing patchwork of distinct standards.

As with other program elements, we simply lack the experience to be confident that the actual implementation of standards will meet our theoretical expectations. We do not know whether it will be possible to develop standards that meet the objectives outlined above—or whether they will be accepted in the market. Indeed, there is considerable room for skepticism that such an approach can succeed in our large, decentralized labor market. Nonetheless, this is a strategy that offers some promise and may be worth pursuing. One useful approach is to organize standards development around a cluster of occupations and create national, industry, and community boards to maintain consistency.

Research and Development

Given the numerous uncertainties associated with large-scale expansion of the kind of school-to-work transition programs described here, it is important that considerable care be taken to learn lessons as they emerge. This means that resources should be dedicated to documenting experience, evaluating outcomes, and learning from "best practice." Policy makers need to be sure that considerable care is taken to design an effective strategy for learning the lessons which will emerge from the expanded effort. It is also important to provide a mix of formal evaluations and field-based "best practice" research.

Legislative Strategy

Designers of legislation face a choice between two broad strategies. In one model, the new apprenticeship program is loosely defined so that many of the existing efforts—including vocational education, co-op education, tech prep, and career academies—would "fit" with only slight modification. The alternative is to be more prescriptive about the core elements of a program. The former approach has the advantage of building upon programs that are already in place and providing maximum local flexibility. Since we do not have any hard evidence that a "real" apprenticeship model would work, why preclude support for ongoing efforts?

The counter argument is that if the new program initiative simply provides additional support for existing models, we will never know whether undertaking more fundamental efforts makes a greater difference. To make this strategy work, legislation would have to define the new model with precision, clearly indicating which elements are eligibile and which are not. Such a strategy would require making hard choices about central program elements. However, under this strategy, drafters would avoid providing a long list of possible program elements, since most existing programs contain enough of these elements to justify funding.

Part II: Youth Employment Policy Seminar Presentations

The preceding recommendations for a national youth apprenticeship program were informed by the "Youth Employment Policy Seminar," sponsored by the National Center on the Educational Quality of the Workforce (EQW) through research Project 25: Youth Employment as a Determinant of Attitudes Toward Work, Education, and Comportment. Project 25 posed several questions on youth employment issues and set out to answer them through this symposium, which brought together policy makers and researchers from a wide range of disciplines. Held on March 3 and 4, 1993, the "Youth Employment Policy Seminar" explored what is currently known and unknown about youth employment and about policies aimed at improving school-to-work transition. These questions served as a foundation for the discussion:

- To what extent do the entry-level jobs that young people obtain serve to expand or constrain their chance of advancement and success?
- How can the links between employers, workers, and schools be improved to provide students with a better understanding of the knowledge, skills, and behavioral standards required in the workplace?
- In what ways might an expanded system of youth apprenticeships, co-ops, and other experiential learning programs contribute to a stronger, more productive, and competitive American workforce?

The conference was designed to address these rather broad questions through five discussion sessions focusing on distinct topics: the demand for youth labor; gains from working while in school; the transition process; school-based policies; and programs for out-of-school youth. Several of the participants were asked to prepare presentations reviewing the existing body of knowledge on each topic. After each individual presentation, the group collectively identified directions for future policy initiatives and research.

Because youth apprenticeships are at the forefront of current policy discussion, this paper opened with a detailed account of a presentation on youth apprenticeships given by Paul Osterman at an EQW Washington Public Policy Seminar, which drew heavily on information provided by the conference. This section of the paper summarizes each of the five presentations delivered at the seminar: "The Demand for Youth Labor"; "The Payoff to Working While in School"; "School-to-Work Transition"; "School-Based Policies"; and "Programs for Out-of-School Youth."

The Demand for Youth Labor

The first session, "The Demand for Youth Labor," was led by Frank Levy of the Department of Urban Studies at the Massachusetts Institute of Technology and Richard Murnane of Harvard's School of Education. Their presentation assessed the nature of the demand for young workers in the 1980s, attempting to ascertain whether there is evidence that cognitive skills make a difference in wage levels. Two trends characterized the earnings of young males during this decade: a decline in the earnings of those who lacked a college education and the steady increase in inequality

among workers with the same amount of formal education and labor force experience. In the decade from 1979 to 1989, the earnings of 25- to 34-year-old males who graduated from high school but did not go to college declined 15 percent. When compared to the relatively stable earnings of young male college graduates during this decade, the college/high school wage differential grew from 16 percent to 43 percent.

Murnane and Levy hypothesized that income inequality among high school graduates increased because employers screened applicants for employment more selectively by paying greater attention to skill levels. This explanation would hold only if widespread changes in the nature of jobs in the economy had changed. In order to test this hypothesis, Murnane and Levy analyzed data on the importance of elementary math skills to explain the subsequent wages of 23- and 24-year old workers. The data came from two longitudinal surveys of large, nationally representative samples of high school seniors. Each group took a battery of cognitive tests as high school seniors; from these tests, Murnane and Levy explored whether math scores were more important in explaining the 1986 wages of workers who graduated from high school in 1980 than they were in predicting the 1978 wages for 1972 graduates.

Table 3 displays the predicted impacts that differences in math scores had on wages in 1978 and 1986 for males and females with the same background characteristics who did not go to college. In 1978, the difference between a weaker and a stronger understanding of basic mathematics skills is associated with a modest 46 cents-per-hour difference in hourly wages for 24-year-old males. In 1986, however, the same test score differential is associated with a $1.15-per-hour wage differential. For young women, the pattern is also striking: in 1978, the test score differential correlates with a 74 cents-per-hour wage differential, while in 1986, the wage differential is $1.42 per hour. For Levy and Murnane, these figures signal a shift in firms toward rewarding higher skills and perhaps point to a greater number of firms engaging in restructuring than the previously cited 5 percent.

The ramifications of this finding for youth in the labor market go beyond the necessity to take high school math classes—it signifies trends in demand for skill. It also identifies where the rewards are found: the loss of low-skill, relatively high-wage jobs in the 1980s has resulted in competition in the service sector, where skills matter more. Clearly, there has been a shift in demand away from occupations that have traditionally employed students with high school diplomas; a more indirect conclusion is that workplace organization may be changing at a quicker pace than was assumed, and that these changes will affect the nature of demands for skill. Murnane and Levy offered pragmatic recommendations that send a clear message to high school students, whether or not they intend to pursue post-secondary education: (1) graduation from high school and attainment of post-secondary education are extremely important; and (2) while in high school, students should take academic courses that serve as gateways to the technical fields or to post-secondary education.

Can policy intervene during difficult school-to-work transitions to facilitate the match between applicant and occupation? Murnane and Levy found that although cognitive skills of high school graduates do not impact their earnings as early as two years after graduation, they eventually matter—four years later. Also, these skills mattered more during the 1980s than they did only eight years earlier. Murnane and Levy developed two hypotheses from these findings that could affect policy-making decisions: (1) young students who see that the skills of older siblings do not impact their wages may perceive a disincentive to learn cognitive skills while in school; (2) to remedy this situation, it may be desirable to develop initiatives that attempt to connect more closely school and work experience, thereby

Table 3

Hourly Wage Rates (in 1988 Dollars) 6 Years after High School Graduation Compared to Scores from a Basic Mathematics Test

	Males			Females		
Math Score	Average	6 points below average	6 points above average	Average	6 points below average	6 points above average
Year of High School Graduation/Year Wages Measured						
1972/1978	$9.49	$9.26	$9.72	$6.82	$6.46	$7.20
1980/1986	$7.92	$7.37	$8.52	$6.55	$5.88	$7.30

Source: Murnane, Willett, and Levy 1993.

increasing the links between cognitive skills and early wages and potentially increasing incentives for students to work hard while in school.

The Gains from Working While in School

David Stern of the University of California at Berkeley and the Centre for Educational Research and Innovation, OECD, examined the benefits and costs of working while in school. He was asked to determine the gains to working while in school—both after school and during the summer—and whether different types of work experience have differential returns. Stern reported that the proportion of high school students who hold paying jobs during the school year has been increasing since the late 1940s, particularly for females. Work experience may add to students' knowledge and skill, but it also may interfere with educational attainment, detracting from long-term earnings and occupational status. If this trade-off does exist, Stern asked whether it may be possible to mitigate it through programs such as cooperative education and youth apprenticeships.

Stern indicated that all studies investigating this issue find a positive association between the amount of high school work experience and employment or earnings a few years later. However, most studies also show that students who spend many hours per week working show inferior school performance. They put less time into homework, get lower grades or test scores, are more likely to drop out, and express less positive attitudes and aspirations about school. He quoted Greenberger and Steinberg, who say: "Working in high school may make students economically richer, but psychologically poorer" (1986). On the other hand, most studies find a positive association between school performance and working a moderate amount of hours while in school, including better grades and lower drop-out rates.

Stern finished his presentation by exploring the role of public policy in mitigating the trade-offs of working while in school: the positive economic consequences versus the negative effects on school performance. The terms of this trade-off, according to Stern, might be improved by relating students' jobs to their course work, so that work and school

reinforce each other instead of competing with or undermining one another. Several programs that attempt to connect work and school already exist, but evaluation of these programs has not been extensive. Youth apprenticeships, which at the moment represent the most direct attempt to link work and the classroom, are too recent to offer compelling results. Career academies also make the link, but related work constitutes only one element of these programs, which also include school-within-school formats and combined academic/vocational curricula. School-based enterprises exist in 19 percent of U.S. high schools and usually provide unpaid work related to students' courses, but they have never been systematically assessed.

Cooperative education, which relates wage-earning, off-campus jobs to students' courses, has undergone some evaluation. Although the reviews are mixed, co-op programs offer a unique opportunity for linking work with the classroom. They provide supervised training in the workplace and a collaboration between employers and schools in evaluating student performance. In a classic co-op program, teachers place students in jobs directly related to what is taught in the classroom. Yet despite this obvious linking, co-op programs have not consistently been found to give their students advantages in the labor market.

A study by Herrnstadt, Horowitz, and Sum (1979) compared male high school seniors in various programs and found that co-op students had more positive perceptions of their senior-year jobs and the relationship between school and work. However, 17 to 21 months after graduation they did not show higher rates of labor force participation, employment, or wages. Stern mentioned that cooperative education may not have a labor market payoff because the knowledge and skill obtained from one employer through these programs may not be recognized by another. Stern and Stevens (1992), using Colorado UI data, found that co-op students who continued working for their co-op employer did obtain higher earnings, but other co-op students did not.

The School-to-Work Transition Process

Thomas Bailey, a professor at Columbia University's Teacher's College, followed Dr. Stern with a presentation on school-to-work transition, reviewing both its concept and its present implementation. He first identified three problematic assumptions about the school-to-work concept:

1. The term implies a one-time transition, while many students and workers experience alternate spells of work and learning.
2. The term also suggests a separation between school and work, rather than stressing increasing the integration of the two.
3. Current thinking focuses attention on moving people from one set of institutions (schools) to another (workplaces), rather than on the problems within those institutions.

The term "school-to-work" also has taken on a much broader meaning and includes programs whose strategies are not strictly "school-to-work": tech prep programs, which move students from school to school; integrated academic and vocational education programs, which require pedagogical reform; apprenticeship programs, which represent a broad educational reform strategy but which also are designed to lead to further education in some cases; and work-to-work transition employment boards, which include a strong element of retraining.

Given the range of definitions for school-to-work transition programs and their applications, Bailey provided guidelines for conceptualizing the transition more narrowly. He suggested defining the school-to-work problem for students not bound for college as the "wasted time" between the end of school and long-term, stable employment. Many analysts

have suggested that employers perceive youth to be irresponsible and immature; as a result, many employers make it their policy not to hire anyone below the age of 25 (Lester 1954; Osterman 1980; Rosenbaum 1989). Due to the lapse in time between school and permanent employment, it is harder to assess employees' academic skills; in this scenario, academic achievement becomes less important and further exacerbates the lack of incentive for increasing academic employment.

Bailey also stressed the importance of access to information and signaling in the school-to-work transition process. Much discussion centers around information about student abilities, employer needs, and skill requirements. But would the problem be solved simply by providing new and different types of information to students, schools, and employers? Bailey feels that this is not the only solution, but that generating new types of information could be an effective part of a broader strategy that includes education and work reform. In terms of signaling, on the other hand, there is a variety of information suggesting that youth not bound for college have little incentive to work hard or get good grades in school. Even the effect of cognitive skills is ambiguous for young workers, and grades do not lead to higher earnings. There is no strong relationship between employment outcomes and behavior information from schools; employers don't believe that behavior in school predicts behavior at work, and they do not trust grades or credentials from some vocational programs.

Bailey followed this discussion with an exploration of the communication between schools and businesses. Although many argue that there is a significant lack of communication, the question that should be addressed is whether improved communication would confront the school-to-work problem. Bailey does not believe that improvement in this area will solve the problem for the following reasons:

- There is a risk that schools will be blamed and that employers will be tempted to dictate school reform (Timpane 1984; Philippi 1989).
- It is not clear whether employers are able to articulate which skills they seek in employees—they give lip service to academic skills, say they hire based on comportment, and then fail to utilize information about comportment in the decision-making process.

Intermediary organizations, which could facilitate information exchange between schools and businesses, are designed to help students or high school graduates move into the workforce. They usually serve four functions:

- to provide information and guidance to the students about what occupations are available and what skills and competencies they would need for those occupations;
- to provide information about job openings;
- to develop contacts with local employers, thus establishing (at least theoretically) a link to the workplace;
- to substitute for the social networks that previously provided information about jobs and skills.

School guidance counselors, however, play a very small role in this mediation; some researchers argue that counselors often do not provide information about available jobs, job searching, or how to interact with employers (Rosenbaum 1976; Dunham 1980). They have little contact with firms and rarely know the outcomes of student job searches. If schools are ineffective in this area, other institutions designed to ease the transition have not had great success either. Bailey mentioned three programs that attempt to do this; two have had little success—the U.S. Employment Service and New York Working—and one, Jobs for America's Graduates, has performed slightly better.

Bailey also addressed certification systems and their role in school-to-work transition. The development of standards

and certification is one of the central issues in the current discussion of educational reform. In a general sense, certification is designed to give incentives to students to work hard; give incentives for schools to innovate and improve; give students a portable credential recognized throughout the country; and help reassure employers that young employees possess mature skills. Representing outcome-based systems, assessments and certification would be reliable indicators of what a student knows or can do, rather than a guarantee that a student has taken a particular set of courses or has spent a set amount of time in an educational institution. Considerations include: covering the breadth of skills and the scope of the occupations for which skills are certified; establishing a set of exams or assessments for general academic education before students enter specific technical programs or post-secondary institutions; relating credentialing to broader educational reform; changing the way production is carried out; and establishing new relationships between schools and workplaces.

Although information alone would not solve the problem, Bailey sees the development of stronger relationships between employers and schools as the primary answer. Such networking is difficult in the United States because an institutional infrastructure that would link employers and schools does not already exist. In addition, voluntary employer participation would be tenuous. However, producing new standards, helping students find work, and improving available information are all possible within the framework of establishing institutional relationships between schools and employers.

School-Based Policies

Richard Kazis of Jobs for the Future contributed a review of school-based policies that create links between schools and employers. Using a range of programs as examples—cooperative education, tech prep, "High Schools That Work," career academies, school-to-apprenticeship demonstrations, and youth apprenticeship —Kazis focused on the following:

- descriptions of these emerging models, with particular emphasis on the points of commonality and difference;
- review of research on the effectiveness and outcomes of the models;
- key issues about school involvement in these efforts; and
- key issues about employer involvement in these efforts.

Kazis began by expressing the importance of school-and-work programs that involve three types of integration: academic and vocational learning in school; school-based and work-based learning experiences; and secondary and post-secondary learning opportunities. Programs that move in this direction, Kazis said, have a better chance of raising skill levels, connecting young people to jobs, and opening doors to post-secondary education. In general, Kazis found little research on all the models and reported finding limited evidence of economic impacts. Most programs were too young to assess fully; those with more experience had no data; and other programs experienced mixed impacts on wages, employment, and labor force participation.

However, Kazis did mention three areas in which these programs could point to clear, positive impacts: improvement in behavior, in performance and persistence issues (as gateways to post-secondary education), and in connections to jobs. Similarly, students involved in some of the programs that have been evaluated showed an improvement in attitudes toward work and school, had better attendance rates, and perceived a greater connection between school and work.

Cooperative education programs represent the largest of the school-based efforts, reaching over 450,000 juniors and seniors annually. These programs place vocational educa-

tion students primarily in business and marketing industries. Key elements of the program include little change in the curriculum, although some programs provide a class to reflect on work experiences for schools, and job placement (10-15 hours) in the field of occupational choice for work. Cooperative education creates the following linkages: support and quality control; a co-op coordinator who visits sites; written agreements between employers, students, and schools; and employer evaluation of students. Based on a consensus of several longitudinal surveys (a one-city 1979 study; a 1976 federal study; National Longitudinal Survey of Youth; National Longitudinal Survey, Class of 1972; and High School and Beyond), Kazis reported the following research findings on cooperative education:

- Co-op students tend to be more positive about school—attendance and satisfaction with school are higher for these students.
- Co-op students perceive a stronger connection between school and work.
- There is no evidence of economic outcomes in terms of labor force participation, employment, and wages.
- The quality of jobs procured by co-op students tend to be higher than those taken by non-co-op students—they tend to be placed in positions in which they learn new things, use reading and writing on the job, have contact with adults, perform meaningful work, and have a job related to their desired career.

A 1990 survey of tech prep efforts in the United States identified 122 programs in 33 states; proponents claim there are approximately 80,000 to 90,000 participants. In these programs, vocational education students seek training for technician-level occupations in which A.A. or post-secondary certificates are needed or preferred. Career areas usually include health, auto repair, electronics, business, and engineering technicians. In most cases, tech prep represents a "school-to-school" transition program, which incorporates applied academics (math, physics, and communications) at the secondary level and promotes articulation agreements between secondary schools and post-secondary institutions to avoid redundancy in curriculum. Although there is generally no real work component in this model, there have been efforts to include it in some local programs such as Boston's Project Pro-Tech. Tech prep does create linkages with employers because it asks them to serve an advisory function. Very little is available on tech prep in terms of research findings.

Sponsored by the Southern Regional Education Board, "High Schools That Work" differs from most programs in that it incorporates the ideas of tech prep with an emphasis on changes in high school curriculum. In 1992, "High Schools That Work" operated in 19 states at 100 sites, targeting non-college track vocational and general education students. The program aims to affect significant change in high school curricula: setting higher expectations in academic and vocational classes; offering new and revised courses with an emphasis on communications, math, and science competencies; and having an applied academic focus. For staff development, materials and time are set aside to encourage academic and vocational teacher interaction. There are also efforts to orient the student as a worker and to provide guidance, counseling, and academic support. There are no work components in this program. Research findings are derived from a study of eight sites with the greatest gains in achievement on the National Assessment of Educational Progress (NAEP) for 1988 through 1990. The study reported an increase in the percentage of vocational completers at these high schools who:

- improved on NAEP reading (89 percent closure in the gap), math (36 percent closure), and science (75 percent closure) scores;
- completed at least three years of math or science;
- enrolled in math courses during their senior year;

- felt there was less course content repetition;
- felt vocational teachers stressed reading and writing;
- received help from a math teacher.

There was no evidence of economic outcomes. The difficulty, however, is that this evidence is based upon the best performing sites and may not accurately reflect the program as a whole.

School-based enterprises offer students jobs, but they do so within the schools. They involve students in a broad range of community-oriented products and services, including home construction, child care, and retail goods. These programs tend to be run by vocational students and are more common in rural communities. Schools sponsor activities during which students produce goods and services for the community. Curricular integration and an "all aspects of the industry" focus constitute the academic component of the program, which also provides students with active learning and entrepreneurial training. There is no linkage with outside employers, except in advisory capacities. Although systematic, objective studies of outcomes are unavailable, some comparisons have been made between students who participate in school-based enterprises and those who hold youth labor market jobs outside of school. The comparison shows that school-based enterprise students are highly motivated to learn and report having better overall experiences relative to students who hold jobs outside of school.

There are three distinct networks of career academies, which are schools-within-schools covering a broad range of more than 20 career fields. Some of these fields are: finance, travel and tourism, health, public service, transportation, electronics, construction, education, graphic arts, and communications. The Philadelphia High School Academies Project runs 25 academies in 16 high schools, with a total of 2000 enrolled students. There are approximately 50 California Academies statewide. The National Academy Foundation, which operates in many states, coordinates 75 programs and 4100 students. All of these programs target at-risk youth in grades 10 through 12. Since career academies are schools-within-schools, they are able to determine their own curricular strategies—which include block scheduling, team teaching, an integration of academic and vocational learning, and organization by occupational themes. Students experience job shadowing in their early years, mentoring in the junior year, and paid summer work in the summer after junior year that often continues as part-time employment during the senior year. No explicit linkages exist between jobs and classes. Employers do serve, however, on steering committees, act as mentors, and provide teachers with summer jobs in industry. Studies have been performed of the California, Philadelphia, and New York City career academies, but they did not determine which program components make a positive difference in student performance. The study of California's career academies (Stern, Raby, and Dayton 1992) did find, however, that career academies graduated a larger percentage of students, that a greater percentage of students found jobs through school and felt the jobs were related to the school program, and that career academy students were just as likely to continue into post-secondary programs as a comparison group. After 15 months, a follow-up study of California's two original academies found that 62 percent of one class and 47 percent of the other class were enrolled in post-secondary institutions. Fifty-one percent and 34 percent, respectively, were employed. The academies provide drop-out prevention without a watered-down curriculum.

School-to-apprenticeship demonstration programs consisted of eight federally funded projects operating in the late 1970s. Four programs—in Cleveland, Nashville, Houston, and New Orleans—were funded by the Bureau of Apprenticeship Training (BAT) and targeted vocational education students. The remaining four—in Iowa, New Jersey, Rhode Island, and Illinois—were funded by the Office of Youth

Programs and targeted minorities, females, and the economically disadvantaged. Apprenticeship demonstration programs covered industries that were both traditional and non-traditional apprenticeable trades: building and construction, electronics, machine trades, auto repair, drafting, sheet metal, and floral design. Twelfth-graders in cooperative education programs were eligible and spent half-days in school and half-days in work. No change in school curriculum occurred, and students were paid for their work based on a progressive pay scale. These programs formed the following linkages: students formally registered as apprentices with employers, schools, and government; and a career placement coordinator or co-op instructor served as a personal link. Six of eight demonstration programs were discontinued after federal money disappeared because there was no local investment in the programs; the employers were given wage subsidies with federal dollars and lost interest when the subsidies ended; and there were conflicts with other vocational education programs over students, resources, and job placements. A 1980 CSR Incorporated study of post-high school interviews with former student apprentices found higher levels of job satisfaction in current or most recent employment, more "occupational stability," a higher performance level (as rated by employers), and no significant wage impacts.

The concept of youth apprenticeships is a fairly new effort to improve the school-to-work transition for youth. These programs differ from the others because they include school, job, and system reform—and in that sense represent an ideal model. More than 30 demonstration projects have been initiated in industries such as allied health, manufacturing (particularly metalworking), electronics, printing, and finance. Programs usually target technician-level jobs in industries where training requirements dictate more than a high school degree. The programs are designed to serve general and vocational track students, but many of these demonstrations have not developed access strategies for students with special needs. Programs begin in the eleventh grade and usually include an integration of academic and vocational learning, team teaching, block scheduling, a post-secondary program linkage (usually an articulation with community colleges), and academic courses which incorporate and use lessons from work. Students engage in paid work based on a progressive wage schedule and in employer-guided learning and mentoring at work. The best of these programs forge the following linkages: teachers and employer supervisors meet to design curriculum; teachers spend time at the worksite both during the school year and summer; and all abide by a training agreement specifying roles and responsibilities. No extensive research has been performed on the outcomes of these programs. However, Jobs for the Future evaluated the first year of Project Pro-Tech in Boston. They found:

- a higher percentage of students continued in grade-level math (85 percent, compared to the non-Pro-Tech group's 61 percent);
- a higher percentage continued to study science (94 percent versus 52 percent);
- the average GPA dropped slightly, due to the increased difficulty of courses;
- 40 percent quit or were terminated in the first year, due largely to enrolling many students who did not meet the entry requirements;
- the quality of the job assigned to a student accounted for the significant variation in profiles of those who were terminated and those who continued.

Little rigorous research has been done on these models, and it is too early to determine whether they will have significant economic impacts on wages, employment, and labor force participation rates. They do appear to have had general impact, however, in non-economic areas:

- attitudes toward work and school improve;

- attendance usually rises;
- there is usually an increase in the perception of a connection between school and work;
- persistence in college-track math and science courses rises; and
- the quality of job placements tend to be better than those of non-program youth.

These general results cut across programs that are school-only, offer primarily work experience, and try to integrate and reform the two institutions.

For apprenticeships to work, both schools and employers need to be genuinely involved. Kazis gave the following recommendations to expand school interactions and involvement with employers:

- require staff to have specific assignments (e.g., co-op coordinator, job developer);
- ensure that there is a sufficient number of students involved in the program to make curricular reform worthwhile;
- provide teachers with summer jobs in industry;
- give teachers development time to plan and to practice integrating academic and vocational as well as school and work learning; and
- foster more than just an articulation between secondary and post-secondary institutions.

To encourage the involvement of employers with schools (beyond business education partnerships), it may be useful to stress the benefits that will accrue to them beyond simply fulfilling their community responsibilities:

- satisfying the short-term need for workers;
- decreasing turnover in entry-level positions;
- signaling, through economic development strategies, that local employers care about skill levels; and
- providing training for front-line workers and supervisors in the skills that employers want most—teamwork, mentoring, clarity of expectations and instructions, motivation, and productivity.

Programs for Out-of-School and Disadvantaged Youth

Fred Doolittle and Robert Ivry of the Manpower Demonstration Research Corporation (MDRC) were asked to focus on programs for disadvantaged youth who are no longer enrolled in school. The goals of this presentation were to provide background on the research findings for disadvantaged youth and out-of-school youth and to extract from the research possible implications for future inquiry and policy. They began by mentioning that overall results from past studies are generally discouraging, although new information is now available from MDRC's JOBSTART demonstration (a test of education, training, job placement assistance, and support services), which offers insights into program improvement. While education and training programs for at-risk youth often lead to improvement in "in-program" outcomes and educational attainment, they have rarely led to long-term improvements in employment and earnings for all youth served. However, behind the aggregate results, there are differences among subgroups and sites. The next step is to investigate why those differences occur and identify the program elements that foster them.

Discussing programs for at-risk or out-of-school youth, Ivry and Doolittle provided a framework in which to consider program impacts. Figure 2 illustrates the type of investment implicit in many youth programs, particularly second-chance programs for out-of-school youth. They called attention to the following assumptions which serve as foundations for the paradigm: the earnings of similar youth not in the program (represented by the control group) do rise over time to reflect growing work experience; the initial period of participation in program services implies an opportunity cost of foregone earnings for youth; there is a peri-

od during which people in the program are expected to catch up to their counterparts; and there is a period of payoff, when enhanced skills are expected to produce gains. In a program successful from the participant's perspective, the initial opportunity cost is smaller than the later payoff. In a program successful from a social perspective, the costs of resources to provide added services are less than the benefits it produces—or the distribution goals of the program outweigh any loss.

Figure 2
A Theoretical View of the Payoff of a Personal Investment in Education and Training

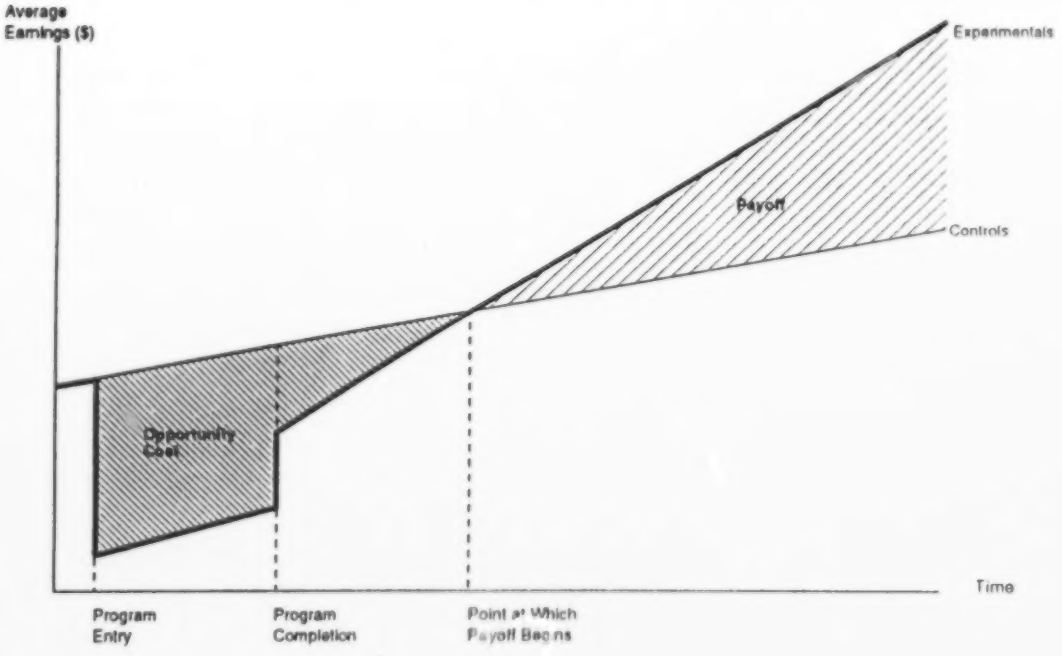


Table 4 (in-school programs for disadvantaged youth) and Table 5 (programs for out-of-school youth) both contain summaries of studies on respective programs. Overall, the results have been discouraging, since few programs have marked and enduring effects. With the exception of Job Corps, second-chance education and training programs have not been effective over the long term, although the results are slightly more encouraging for young women than young men.

Doolittle and Ivry continued by saying that it may appear as though "nothing works," but that is not the case. Instead, they explained that the problems are caused by large initial losses and smaller-than-expected subsequent gains for some groups. The findings do indicate three strategies that may help to improve youth employment programs:

- target outreach to ensure that those youth who would benefit most from the impacts of the program are included;
- lessen the initial opportunity costs of participation; and
- attempt to boost the long-term payoffs.

Table 6 lists suggestions to these three approaches for improving program impacts.

Table 4
Summary of Studies of In-School Programs for Disadvantaged Youth

Program	Target Group	Program Services	Evaluation Findings
Summer Training and Education Program (STEP)	14 -to 15-year-olds, low-achievement students who are JTPA eligible.	Spans two summers and offers work experience, remediation, and life skills training.	In-program impacts on basic knowledge of contraception, but not longer-term impacts on educational attainment, earnings, parenting, or welfare receipt.
Youth Incentive Entitlement Pilot Projects (YIEPP)	16- to 19-year olds, low-income youth without a high school diploma.	Guaranteed minimum wage job part-time in school year and full-time in summer, if in school and meet job and school standards.	Generally successful implementation of job guarantee; elimination of black/white differences in employment and significant increases in earnings during program operations; and evidence of continued earnings gains in short post-program follow-up.

Table 5
Summary of Studies of Programs for Out-of-School Youth

Strategy	Example	Services	Evaluation Findings
Job Placement Assistance	70001	Job prep workshops, job search assistance, stress GED completion.	Initial impacts on employment and earnings which soon disappear.
Work Experience	Supported Work	Work experience with peer support, graduated stress, and close supervision.	In-program impacts on employment, earnings, and welfare, but no long-term impacts.
"Brokered" Programs for Young Mothers	Project Redirection	Mentoring and support services, education, work readiness, and life skills for 14 - to 17-year-old mothers.	In-program effects on participation in education and employment, which disappear by the two-year mark; at five years, small impacts on earnings, and larger impacts on welfare receipt and child outcomes.
Education Plus Training	Job Corps	Residential program with education, training, work experience, financial support, support services, and job placement assistance.	Impacts through four years of follow-up on employment, earnings, GED receipt, and crime and positive benefit-cost ratio.
	JOBSTART	Non-residential program with education, training, limited support services, and job placement assistance.	Modest impacts; leads to increased participation in education and training; large impact on GED receipt; largest impacts from CET program (largest and among the least inexpensive).
Broad Array of Services	JTPA	Training, education, job search assistance, on-the-job training, work readiness, and many variations.	Results moderately positive for adults, but short-term results for youth not yet positive in terms of earnings impacts; for OJT and other services, negative impacts confined to males with a prior arrest.

Table 6
Suggested Approaches to Improve Program Impacts

Targeting Outreach	Lessening Opportunity Costs of Participation	Providing More Long-Term Payoffs
Include within outreach efforts those for whom impacts are likely to be greatest.	Low-intensity, short-duration services are not promising, based on job search studies.	Strengthen the link between education, training, and the labor market through careful selection of training options and efforts to gain exposure to work.
Work to include youth with many barriers to employment, but monitor closely the morale and motivation of participants and staff to get the right balance of easy winners and tougher cases; exclusive focus on youth with many barriers to employment will complicate program operations.	To improve participation: offer paid work experience, which is promising in combination with other services; and offer stipends, which currently are not permitted in JTPA programs.	Provide real opportunities for growth in life skills by recognizing young people's need to make contributions and chances for recognition; opportunities for leadership in the program design; and encouragement to improve interpersonal skills.
	Concentrate program participation in an intense period; this makes for full days and calls for serious investment of time and effort and may increase the need for support services.	Increase completion of program activities.
	Encourage youth to combine work and program participation, which calls for flexibility in scheduling.	Emphasize the GED as a vehicle for earnings impacts, particularly since it opens doors for further education and training.
		Strengthen job placements.
		Initiate continuing services after initial placement to help youth make later transitions into stable employment and better jobs.

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